



THOMAS G. NEWMAN,
EDITOR.

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In the changeful April weather,
Playing hide-and-seek together,
Rain and sunshine, light and shadow
through the woodlands come and go;
Now athwart the tree-tops glancing.
Now amid the violets dancing
In the quiet glades below.

Mr. Henry Alley, of Wenham, Mass., wrote us on April 7, 1890: "Spring opened with April, and bees seem to be doing well."

"Common-Sense Bee-Keeping" is the title of a 16-page pamphlet issued by Rev. A. R. Seaman, of New Cumberland, W. Va. We find in it more "common-sense" on various subjects than is usually found in similar publications. It is poorly printed, but it is readable as well as sensible.

Died, at his home in Versailles, Cattaraugus county, N. Y., Capt. H. Chapman, on April 8, 1890, aged 80 years.

This announcement will be read with sorrow and regret by the many readers of the BEE JOURNAL. Mr. Chapman was widely known throughout the country as the one who first introduced to the public the celebrated "Chapman Honey-Plant." He was a man of sterling integrity, and his loss will be deeply felt in the community where he has lived for half a century.

Introducing Queens.—Mr. Dennis Cooley, of Globeville, Mich., asks:

Please answer this in the AMERICAN BEE JOURNAL:
Is it right to put a new tested queen into a hive as soon as the old queen is killed or removed?

If the queen is properly caged, she may be introduced at once.

Honey in the Pyramids.—Peter Moyer, of Orangeville, asks the following questions:

1. Have any of the readers of the BEE JOURNAL any history about the preservation of honey in the pyramids of Egypt? About eighteen years ago I read a short statement about this in some paper. I would like a further account, if true.

2. How long can honey be kept in good condition?

1. Any one having the historic particulars will oblige our correspondent by sending them to us for publication.

2. Honey in the comb will generally granulate before the second honey season, and when that is the case, it cannot be liquefied without destroying the comb. Honey out of the comb can be kept for years in good condition.

Transferring Bees.—D. Cargill, of Maplewood, N. Y., writes thus:

Please answer through the AMERICAN BEE JOURNAL these questions:

How shall I transfer bees from one frame-hive to another, where the combs are built crosswise, or nearly so?

Shall I cut the combs out and transfer the bees, or drive them out, on full sheets of foundation, and feed them until honey is coming in? There is not much honey in the combs.

Cut the combs out and transfer, in the same manner, as from a box-hive—all the features of a frame-hive having been lost by the combs being built crosswise of the frames.

If you prefer, they may be "driven" out and treated as suggested.

Bee-Spaces—Swarming.—A correspondent in Vermont writes thus:

Please answer these questions in the AMERICAN BEE JOURNAL:

1. In using a metal queen-excluder, does it lay on the frames, or is there a bee-space between?

2. Which is best, to divide or let the bees swarm naturally, where there are 400 or 500 frames of nice, clean combs and you want increase, having only a few colonies left?

1. There should be a bee-space between the frames and the queen-excluder.

2. Some prefer one way and some the other, according to location, surroundings, etc. We should prefer to divide them.

Discoveries.—These questions are presented for reply in the BEE JOURNAL:

1. Do you think a bee-keeper serves his best interests by publishing all his discoveries, and freely giving his inventions for the benefit of all?

2. If so, please briefly describe what you consider our most important invention or discovery made within the past year or two.—ONE WHO WANTS TO KNOW.

1. Perhaps not, but there are times when it will not pay to secure all rights to himself. The amount of revenue could not be made to pay for a patent.

2. This opens a question which would not be pleasant to discuss in the BEE JOURNAL.

The "Ram's Horn" is the title of a large weekly religious newspaper just started in Indianapolis, Ind., at \$1.50 a year, by Elijah P. Brown, who, having achieved a national reputation as a newspaper man, has lately been converted, and now begins an earnest, spicy, and interesting religious paper for the home. The editor's salutatory remarks thus:

Our constant endeavor will be to make religion attractive, and try to show that it is full of sunshine, hope and love. We want everybody to find out that God is the friend of all that is good and true.

That is just the kind of religion we believe in—just the kind that will do the most good in the world, and we wish the *Ram's Horn* abundant prosperity.

Send to Brother Brown for a sample copy, and see if you do not want it every week.

We will supply the *Ram's Horn* and either of our Journals for \$2.25 a year. Or all three for \$3.00.

In California, the bees have been swarming ever since the latter part of March, writes Mr. Gustav Bohn, of Messina. He adds: "I expect a fair crop of honey this season. My neighbors, the raisin-growers are pulling up a great many of their vines and planting oranges, which will pay better here; so I shall not be likely to have any more trouble with them." It will be remembered that the Union defended Mr. Bohn's case, and proved that the bees had rights which the raisin-growers should respect. The bees are now "on top," and their rights are acknowledged even by their late enemies. So much more to record in favor of the National Beekeepers' Union's defense of the pursuit.

Spring Weather.—While we write this the weather is balmy and spring-like here in Chicago. Mr. W. Addenbrooke, of N. Prairie, Wis., wrote us as follows on April 8, concerning the spring weather in Waukesha County, Wisconsin:

This is the first day of spring weather. It is now, at 10 a.m., 65 degrees in the shade. We had heavy thunder showers last night for a few hours.

I put 120 colonies into the cellar on Nov. 21, 1889, and put all out alive but two on March 21, 1890. They are now in good condition, and I hope for a good season.

Mr. W. Richter, of San Bernardino, Calif., died on March 25, at his bee-ranch. His bees were purchased by Mr. La Rue, his near neighbor, who will hereafter manage that bee-ranch.

New Catalogues and Price-Lists for 1890 are received from—

E. D. Keeney, Arcade, N. Y.—4 pages—Italian Queen-Bees.

Alfred E. Cole, Plainsfield, N. J.—14 pages—Seeds, Plants, Bulbs, etc.

GLEAMS OF NEWS.

Painting Hives.—Relative to the remarks of Mr. Theilmann, on page 217, on the disadvantage of painting hives, Prof. A. J. Cook writes as follows:

Mr. C. Theilmann, in the *AMERICAN BEE JOURNAL* for March 29, asks why the experiments to show that wood was porous were made. They were made to show that our houses are ventilated to quite a degree if made of wood. Papering destroys this ventilation, as does painting in a large part. I believe there is something in what Mr. Theilmann says. Certain it is that unpainted hives are better ventilated than painted ones. If, however, hives are painted white, they would absorb less of the sun's heat in summer, and so the combs would be less likely to melt down than they would in the darker unpainted hives.

I am free to say, that were it not for looks, I should think it wiser to use unpainted hives. Surely, paint does not preserve the wood enough better to pay for the expense.

The same is true of our buildings; yet I paint my buildings, and keep them well painted. This gives an appearance of thrift and neatness that is pleasant to me and to all passers-by.

My sugar house in my maple bush is off from the road in the woods, and is not painted.—A. J. Cook.

Vienna Congress.—The Secretary of Agriculture is in receipt of a communication from his Excellency, Chevalier von Tavera, Envoy Extraordinary and Minister Plenipotentiary of Austria-Hungary to the United States, advising him of an International Agricultural Congress to be held in Vienna in conjunction with the Agricultural Exhibition which is to take place there this summer, and enclosing copies of the programme for said Congress. The programme indicates that the Congress will meet during the first days of September, 1890.

Inasmuch as the programme suggests that applications for membership must be received by the Committee before the end of April, and as the time therefore is very short, the Secretary of Agriculture tenders his good offices to secure membership for those whose applications cannot reach Vienna before the date mentioned, provided they will forward the same with the necessary enclosure to him.

Eggs-actly!—A correspondent who signs himself "Goshen," asks this question:

In your opinion, would it be preferable, when mentioning the different eggs laid by a fertile queen, to use the terms "egg queens," "egg drones," and "egg workers," as suggested by Prof. John Phin, in his "Dictionary of Practical Apiculture," instead of queen eggs, drone eggs, and worker eggs?

While the general adoption of the terms may not be realized, we agree with Prof. Phin, when he says, "the terms egg queens, egg workers, and egg drones express the facts precisely."

Moving Bees.—Samuel Wilson, of Cosby, Tenn., propounds these questions:

I desire to move my bees about June 1, to a better field, and would like to have these questions answered in the *AMERICAN BEE JOURNAL*:

1. Would it not be better to move them on a light night?
2. Would you tack wire-cloth over the entrances, or entirely close the entrances?
3. Would you tack wire-cloth over the entire top of the hives?
4. Do you put them two tiers high, and if you do, how high must the second be raised above the first tier? The road to move them over is very rough and rocky.

SAMUEL WILSON.

Our reply to the several questions is as follows:

1. Any time when the bees are not flying will do.
 2. Tack wire-cloth over the entrances.
 3. Fasten the frames so they cannot slide together and kill the bees; then tack muslin over the frames.
 4. Yes. Raise the upper tiers by putting inch strips of wood across them.
- Secure the load well so that there will be no danger of shifting.

Flowers that Have Odors.—It is surprising that among the innumerable varieties of specimens found in the floral kingdom, there are so few that possess any fragrance whatever, to add to their attractiveness. It has been discovered that of 4,200 kinds of flowers which grow in Europe, only 420—one in ten—are odoriferous. The white flower is most common, there being 1,194 kinds of that; and less than one-fifth of these are fragrant. Of the 951 kinds of yellow flowers, 77 are odoriferous; of the 823 kinds of red ones, 81 have odors; and of the 308 violet-blue kinds, only 13. Of the 140 kinds with combined colors, but 28 are fragrant. It would be interesting to know just how many of the flowers visited by bees, emit any odors. Here is a delightful field of investigation for students of botany.

Arbor Day.—The Secretary of Agriculture has issued a circular, No. 5 of the Forestry Division, giving instructions on tree-planting for purposes of Arbor Day. The circular, which is a reprint of one compiled last year by Prof. B. E. Fernow, Chief of that Division, is intended primarily for use in Eastern States, but the general principles stated to be observed in the choice of trees, the treatment before transplanting, the method of planting and after-care are applicable everywhere, the only difference for other regions being the choice of season, and of kinds to be planted. Send to him for a copy. Address, Hon. J. M. Rusk, Washington, D. C. Plant lindens everytime.

☞ "Frank Leslie's Illustrated Newspaper" last week presents six pages illustrative of the disaster at Louisville, Ky. The pictures are full of interest.

Cuckoo Bees.—An account of these insects, as seen in some Indiana apiaries, is given in the following paragraphs from an exchange:

At a meeting of the Hamilton County (Ind.) Bee-Keepers' Society, complaint was made of a little black bee which robbed apiaries, in portions of Indiana.

Advice was given to re-queen colonies, and close the entrances of the hives thus troubled. But the members said they had tried that, and the robbers still ran in, and the best colonies did not refuse them; that they even came in streams, pouring into the hive.

Much interest was once shown in the matter, and in the discussion which followed several declared they had seen it "hatch" from a cell in a hive of Italian bees. This seemed impossible, unless it was simply a hybrid.

The Chairman then wrote to Prof. Cook, who reported that he thought it must be a sort of solitary insect (as the description sent him said that strong efforts to tree them had failed), they did not cluster like bees. This was reported to the Society, but they wanted more definite information, and went to a colony close by and secured two specimens, which were sent to Prof. Cook, who said that they were probably what are called "cuckoo bees." They lay their eggs in the cells of other bees, and allow the foster-mother to hatch and feed them. Our bees do not fight them.

The "cuckoo bees" have no pollen-baskets, and do not gather honey, but depend upon the fooled foster-mother to warm and care for the young. The Society has reports of damage from it east and west, as far as their membership goes; but south and southwest, it has not been recognized, even by those having 75 to 100 colonies.

Prof. Cook mentions these robbers—the cuckoo bees—in his excellent *Manual of the Apiary*, on pages 29 to 34. They belong to the family of Apidae, but they are "the black sheep" of that family.

Fruit Prospect.—We are not scared about the fruit outlook for this season, whatever the reports from elsewhere. The buds are yet all right, and if nothing unforeseen happens, no late frost like that of last year, no hail, etc., we will not be likely to go without fruit this season. We know the scare is great all over the continent, but the damage is hardly ever quite as serious as it has the appearance at first.—*Popular Garden.*

Convention Notices.

☞ The next meeting of the Carolina Bee-Keepers' Association will be held in Charlotte, N. C., on Thursday, July 17, 1890. N. P. LYLES, Sec.

☞ The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ill., on May 20th, 1890. D. A. FULLER, Sec.

☞ The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Boscobel, Wis., on Thursday, May 1, 1890, at 10 a.m. BENJ. E. RICE, Sec.

☞ The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited. J. N. HUNTER, Sec.

☞ The spring meeting of the Capital Bee-Keepers' Association, will be held in the Supervisor's Room of the Court House at Springfield, Ill., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend. C. E. YOCOM, Sec.

Bee-Keeping in Washington.—Mr. John Boerstler, Vashon, Wash., writes as follows in relation to Washington as a bee-country:

VASHON, Wash., Jan 25, 1890.
The enclosed is taken from the weekly *Post-Intelligencer* of Seattle, Wash., and shows what Mr. A. C. Allen thinks about bees in Washington. His location is not over 50 miles from where I am living, and I think that I shall soon know more about the bee-pasturage. I do not want to make any guess-work about it when I report, for this is a new country, and not settled as thickly as in some other parts of Washington, but I think that we stand a good chance for a bee-country, as the winters are mild, and the seasons long. I had too many swarms to get much honey last year, but my 5 colonies yielded \$15 in honey, bees and swarms. I have lost 3 of them by being queenless, and 2 from not having honey enough to winter on. I think the others are all right, on the summer stands, protected with 4-inch cushions.

JOHN BOERSTLER.

Here is a part of the article referred to by Mr. Boerstler, and published in the *Post-Intelligencer*:

The honey resources in the country are good. Early in the spring the flowers begin to bloom. The chick-weed and other small plants begin to bloom in February and March. The wild plum and a great many other plants also bloom in succession until about the first of April. The soft maple blossom, which is a good flower for yielding both nectar and honey, blooms early. Next is the vine maple, which the pioneer so much dreads to clear from off his homestead. In my opinion it is the greatest honey-yielder of any flower of its size under the sun when everything is favorable.

I have seen the nectar hanging in drops from the beautiful little cluster of flowers, and taken my knife-blade and gathered drops sufficient to get a good taste of vine-maple honey. During a warm, dry spring there are tons of vine-maple honey that go to waste because there are not bees enough to gather it all. Next comes the white clover, which blossoms all summer, but has greatest amount of honey during the month of June. In the latter part of the summer the hardhack, fire-weed, golden-rod, asters, and many smaller plants, both wild and cultivated, bloom until frost. I sow buckwheat for my bees, and I find the silver-hull the poorest grain yielder, but the best honey-plant of any that I have tried. I am at present cultivating several other plants for the purpose of ascertaining their honey productiveness. The bee-balm and catnip is very good.

Last year the Commissioner of Agriculture sent me a package of the Chapman honey-plant seed, which I planted, and it bloomed the first of July, this year, and continued to bloom for about four weeks. The honey oozes out of the bloom, and I have seen five bees on one ball at the same time. This plant is of the thistle family, and is called the "ball thistle" in Europe. It is a perennial plant, and has a seed very much like a grain of rye. I am sure it will pay very much to cultivate it for the honey alone.

Though we may have to cultivate more plants, I am confident it will pay to keep bees in this country. Bees are one of the essentials in fruit-growing. Every well-informed horticulturist knows that if the weather is so the bees cannot work on the flowers to fertilize them, the crop is a partial, if not a total, failure.

A. C. ALLEN.

QUERIES REPLIES.

Distinguishing Pure Italian Bees and Hybrids.

Written for the American Bee Journal

Query 702.—1. What constitutes a pure Italian bee? or how can one be distinguished by its marking? 2. How can a hybrid be distinguished?—X. Y. Z.

See Prof. Cook's article on the different races, on page 39.—H. D. CUTTING.

1. See my essay read at the Michigan State Bee-Keepers' Convention on page 39. 2. The workers do not all show the three bands.—A. J. COOK.

1. The bees in the hive should all have three yellow bands. 2. At least some of the bees will have less than three yellow bands.—C. C. MILLER.

1. One that has three well-marked yellow bands. 2. If you refer to queens, they must in addition, produce all well-marked workers and drones.—C. H. DIBBERN.

1. The Italian bee is a *thoroughbred*—not a pure race. The yellow bands, on the abdomen of all the workers, is the test given. 2. By a part of the bees being yellow, and a part black.—G. M. DOOLITTLE.

1. One that has only pure Italian "blood," and has three yellow bands. All bees with three yellow bands are not pure Italians. 2. All hybrids cannot be distinguished from pure ones. A hybrid may be black, or have one, two or three yellow bands.—A. B. MASON.

1. Three distinct golden bands, adhering tenaciously to the combs, and "bouncing" the moth-worm with neatness and dispatch. 2. By its darker color, dimness of the bands, and, usually, by its lack of amiability.—MRS. L. HARRISON.

The three yellow bands on all of the workers are reliable, as a rule. If many are seen with only one or two bands, they may be hybrids, and show an ugly temper. Pure Italian bees, if rightly handled, are not vicious.—G. L. TINKER.

1. One whose ancestors on both sides have been bred from pure stock. The markings are three or four distinct yellow bands. 2. As many hybrids will have three yellow bands, it is only by inspecting the parent colony that we can detect them.—J. M. HAMBAUGH.

1. One that comes from Italy, or one bred from pure Italians. I doubt if they can always be distinguished by their markings. Popularly, they are supposed to show three yellow bands. 2. I do not believe that they can be always. I cannot always tell a "grade" from a pure-bred short-horn.—EUGENE SECOR.

I have had colonies undoubtedly crosses between the Italian and the black races, which the best of judges would have unhesitatingly pronounced fine pure Italians, but such crosses can generally be distinguished by their color. I think it impossible to distinguish pure Italians with certainty.—R. L. TAYLOR.

1. A pure Italian bee is one that has no impure "blood." One can be distinguished by "faith" and plenty of yellow bands. 2. A hybrid can be recognized by a "lack of faith" and a lack of the yellow bands, provided there is a great destitution of color. Of course, you cannot tell whether the Italian is mixed with Carniolan, German or what all.—JAMES HEDDON.

Pure Italian workers are distinguished by having the three segments of the abdomen

next to the thorax, of a color from a dark leather to a bright yellow. These three yellow rings are very conspicuous when the abdomen is distended. They are less prominent in very young and in very old bees. Hybrids only show one or two of the rings when the abdomen is distended.—J. P. H. BROWN.

1. Bees that are very quiet when handled; that hold tenaciously to their combs; that fight robbers and bee-moth to the death; that thrive when common bees perish, and carry uniformly three yellow bands, are called pure Italian bees. 2. Hybrids are not like the above, although they may show from one to four bands of yellow in the same colony.—J. M. SHUCK.

1. A pure Italian worker-bee is the progeny of a queen whose whole worker progeny will show three distinct yellow bands on the abdomen, when they are filled with nectar. 2. A hybrid may, or may not, have three distinct bands, and we can only decide on purity by examining all the bees of a colony. If a queen produces a colony, a part of which shows two bands, a part one band, and a part three bands, such bees are all hybrids (so-called), although some may show three bands.—J. E. FOND.

1. Of course, a pure Italian bee is one that has no mixture of alien "blood." It is not possible to tell, in all cases, whether Italian bees are absolutely pure or not. A colony that is uniform in color and markings, all the workers having not less than three yellow bands, is probably pure. But all pure Italians are not uniformly marked. 2. If the marking and color are irregular, the bees are probably not pure. "Hybrid" is an unscientific and incorrect term. There are no "hybrid" bees, any more than there are "hybrid" horses, cattle and sheep.—M. MAHIN.

1. A pure Italian bee is a bee that has been purely bred from stock imported from Italy. The stock must be such as were evolved there by nature, uncontaminated by any of the modern crosses. After their importation to this country, where they are likely to mix with the common black race, we say that a pure Italian bee when young and in good health, must show three yellow bands around her abdomen. But if there is a mixture of "blood" from the Cyprian or Syrian races, we are left "at sea." 2. A hybrid colony is known by their mixed color. Some of the bees will look like Italians; others like hybrid bees, and with intermediate markings.—G. W. DEMAREE.

Honey as an "Eye-Water."

Among the various excellent uses of honey is that of a remedy for sore eyes, or eyes that may be affected in any disagreeable way. The following paragraph, from the *Breeders' Gazette*, evidently given in reply to a question about sore eyes in a horse, may be suggestive to our readers, many of whom are interested in horses:

I would suggest that a few drops of pure honey be dropped into the horse's eyes daily, or twice daily. It can do no harm, and I have known some remarkable cures by using honey alone. Let one person hold the horse's head, and turn it a little to one side, while another opens one lid and drops in a few drops of honey. It may effect a cure. I think it worthy of a trial with any eye in horse or ox that is sore from any cause. If the honey is too thick to run freely, it can be warmed a little, which will thin it so that it will flow freely, but care should be taken not to heat it to more than blood heat. New honey will not require heating.

CORRESPONDENCE.

VISITING.

An Account of a Tour Among the Bee-Fraternity.

Written for the American Bee Journal
BY REV. WM. F. CLARKE.

The kind "personal" on page 211, referring to my little visit with the Editor when in Chicago the other day, calls for a word or two of correction and explanation from me. I am spoken of as President of the Ontario Bee-Keepers' Association, which is not quite correct. I had the honor of filling that office last year, but my term expired in January, and the chair is now occupied, and most deservedly, by Mr. Allen Pringle, one of our ablest Canadian bee-keepers—a highly intelligent, scholarly man, a good speaker, and a forceful writer. I wish he were better known to the bee-keeping fraternity, and I trust he will be, but he is a modest, retiring man—needs pushing, to get him before the public.

Then as to that "crutch." It is a rather pathetic picture of me which is presented, and suggests, "Pity the sorrows of a poor old man." It was, however, a true picture at the time, for, owing to a fall I got in the early part of my journey, I was compelled to obtain a crutch after my arrival in Chicago, and, much to my chagrin, had to go on it the rest of my tour; but, I am glad to say, I have been able to dispense with it since my return. The sciatica, and need of a cane, still remain.

My trip took me first to the annual meeting of the Western Ontario Bee-Keepers' Association, which was held on March 13, at Essex Centre—a brisk little town 17 miles east of Detroit. Though the roads were at their worst, we had a fair attendance, and some interesting discussions. The members of this body are an enterprising, progressive class of bee-keepers.

It may surprise the readers of the AMERICAN BEE JOURNAL, to learn that one of the topics discussed at this meeting was the honey exhibit to be made at the World's Fair in 1892. We Canadians are a unit in favor of Chicago for that great event. Foreigners cannot see America by visiting New York. That's only Gotham. To see the continent that Columbus discovered, people must, at least, go as far west as Chicago.

I must congratulate the AMERICAN BEE JOURNAL and its enterprising proprietors on their removal to the centre

of the city, and on the commodious quarters now occupied by them. I always felt it a long pilgrimage, even by street-cars, to 925 West Madison Street. It meant two hours time, going and returning, when your business lay, as it usually does, in the heart of the city. The office is now within 100 numbers of its original location, when I removed it from Washington to Chicago, in 1872. It was then 146 East Madison Street. It is now 246, on the same side of the street. I see only one objection to the present spot, viz: Being easily accessible, it may be frequented by bee-men of leisure, who happen to be in Chicago, and do not know the value of a city man's time. A hint to such may not come amiss.

"Call upon a man of business;
In hours of business;
Only on business;
Transact your business,
And go about your business;
In order to give him time, to attend to his business."

If the only objects of the call are to see the Editor, shake him by the hand, speak a cheery word, and see where the AMERICAN BEE JOURNAL is concocted—that's the "business" of the occasion; do it, and depart, leaving the Editor aforesaid in a happy frame of mind, and firmly persuaded that you are a person possessed of some common-sense. I may add (but friend Newman can skip this), that he used to be a good-looking fellow before *La Grippe* got hold of him; but he has evidently had a severe mauling by that mysterious visitor, and the barber, no doubt thinking they did not match his haggard visage, has cut off the beautiful, twirling ends of his mustache, giving his face a very shorn and shrunken appearance. Seriously, and with fraternal sympathy, let me say, that family affliction, as well as *La Grippe*, has ploughed furrows in his countenance. All who read this will join in the hope that the shadows may soon betake themselves from his household, his hollow cheeks fill up, his mustache assume its former jaunty curves of manly beauty, and "Richard" be "himself again!"

But I must get on with my tour. In returning, I spent a day with Mr. Heddon, who, fortunately for me, was "under the weather," and obliged to stay in the house, not having fully escaped from the clutches of *La Grippe*. He is such a busy man when quite well, that one can only talk with him by jerks. Owing to that plaguy crutch, aforesaid, I couldn't run around with him to the bee-yard, work-shop, *Times*' office, and others of his haunts. At home, I had him pretty much to myself all the time that I was there, and did not have to take him "on the fly."

Well, Mr. Heddon looked quite haggard, too, and not unlike that first picture of him that appeared in the bee-papers, and which, he thought, made him look like a "live corpse." But he, like friend Newman, will doubtless get back his good looks in time, and become "killing" again.

The greater part of the talk two bee-men have when they get together, is unreportable for a variety of reasons, and I can only touch on a few topics that we discussed, viz:

WINTERING BEES.—I think the lessons of the past winter have made Mr. Heddon incline to a better opinion of out-door wintering. He frankly admitted that his out-door colonies have done by far the best during the past winter. The cellar-wintered colonies show some signs of diarrhea, but the out-door ones are entirely free from it. Of course, the season has been an exceptional one, but I would like to see Mr. Heddon become a complete convert to the out-door method, if for no other reason, because I am satisfied it is one of the many good points of his new hive, that, being shallow, it economizes heat. For the same reason it is a good hive for spring, being favorable for early brood-rearing. I have wintered rather weak colonies out-of-doors in the half brood-chamber, and had them come out stronger in the spring than they were in the fall.

THE NEW HIVE.—Judging by the testimonies given in his circular, which I read just before starting on my tour, my own experience and observation, together with what I gleaned from Mr. Heddon himself, I am of the opinion that the new hive will be popular only with a select class of bee-keepers. It requires a nicety of mechanical construction which few bee-keepers can attain who make their own hives, as I suppose the majority do. It does not admit of any slouchy, go-as-you-please management. Not much manipulation of it is needed, but it must be done just so, and in the nick of time. The bee-keeper who uses it must be quick to see at a glance the state of things, know by instinct what is to be done, and do it right there and then. I frankly own that my chief reason for liking the new hive, is that I prefer to handle hives instead of frames.

THE THICK TOP-BARS.—Mr. Heddon showed me some old, weather-worn frames, with thick top-bars—relics of the "long ago." I have some myself. They were used in the Thomas hive, which I had as far back as 1864. I did not find them effectual preventives of brace-comb building. The close honey-board placed just above them, with only a bee-space between them, was often fastened with comb along

almost the entire surface, and came off ragged with fractured comb, requiring a lot of scraping before it could be put down again. The slatted honey-board will obviate this, but so it will with a thin top-bar. I would have the top-bar thick enough to prevent sagging—no more. There are fashions in bee-keeping as well as in dress, and ever the old styles come up again, and are looked upon by the younger people as the latest novelties, whereas the veterans know that they are the old styles "made new."

THE BEE-ESCAPES.—I was describing three samples of those I saw in the BEE JOURNAL office, and expressed the opinion that they were too labyrinthine, and required too much euteness on the part of the bees in order to get out. My notion of a bee-escape is, that it should rather tempt and coax the bees to get out, and make it difficult for them to go in. I was glad to find that Mr. Heddon agreed with me.

SELF-HIVERS.—I doubt their uniform working according to the doctor's orders. So does Mr. Heddon. But, no doubt, many of them will be tried the coming season, and "we shall see what we shall see."

SPECIALISM IN BEE-KEEPING.—Mr. Heddon's faith in this is unshaken. When I told him that Mr. Hall had been led by the stern logic of three poor seasons to contemplate combining something else with bee-keeping, he merely said, "He'll rue it."

Mr. Heddon is full of electricity—he always was, for that matter, but I mean he is full of the science. His son William has become an expert in practical electricity, and it has switched him off from bee-keeping, so that his father loses his best helper among the bees. William has charge of the electric lighting system in Dowagiac, which, for the uses of a small town, is the best I have seen. The incandescent lights are now in operation in Dowagiac, and I own that I was surprised to note the illuminating effects produced by 100 such insignificant-looking lamps. The arc lights being so high up, there is a good deal of waste skyward, where, until people learn how to fly, artificial light is not needed. Mr. Heddon's house is lit up throughout with these incandescent lamps, and it is very nice to be able to ignite or put them out by the simple turn of a button.

From Dowagiac I went to Flint, where I have a son living, who has charge of the Armstrong Manufacturing Works—a branch of similar works in Guelph. It is one of the beauties of our international tariff, that an inventor in this country must either sell his patent to some one in the United

States, or go there and start a similar enterprise. The branch in Flint is bigger than the parent tree in Guelph, and so we lose the inflow of capital which might, and ought, to come here, if the frowning customs wall did not shut it out.

Of course, I called to see Mr. Hutchinson, but could only make a short visit. I found him in his shirt-sleeves, busily at work in his printing-office, where he is editor, foreman, compositor, and devil. The office is connected with the sitting-room by one of those draped archways, which are "all the go" now-a-days. I saw Mrs. H. and the olive-branches. (N. B., one of them is an Ivy.) Their home must be a very pleasant place in summer. The cosy family air inside would indicate that it is pleasant in-doors all the time. Mr. H. looked well. The "grip" has dealt more gently with him, than with most of its victims.

We talked mainly of the *Review*, and I gave him "free gratis" my opinion of it, which cannot, in full, be quoted here. But this much I may say, that, in its establishment, Mr. H. has shown a vast amount of tact and pluck; that it has made a niche for itself; and that, like the new Heddon hive, it will attract only a select class of bee-keepers. Alone, it would not fill the bill, but is a valuable supplement to our bee-literature. It is an *addendum* rather than a rival to other bee-periodicals. It has evidently come to stay, as it is past the critical stage, and is beginning to pay fairly well. Mr. H. is at home very much as he is at conventions, all eyes and ears, but says little. He looks you all over and through, draws you out with leading questions, and forms his own mental conclusions. He makes me think of Burns' couplet:

"A chiel's among ye, takin' notes,
An' faith, he'll print 'em!"

I do not know whether he got anything worth having out of me, but I know that I did not get much out of him, and I felt pumped-like when I left. He is a pleasant, genial fellow whom you cannot help liking, whether or no. But the readers of the AMERICAN BEE JOURNAL will be saying, "That Clarke's as long-winded as ever." So I'll quit, right here.

Guelph, Ont.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 36 pages. It is for sale at this office. The price is 25 cents, post-paid.

BEE-ESCAPES.

A Comparison of the Horizontal Bee-Escapes.

Written for the American Bee Journal
BY C. H. DIBBERN.

The horizontal bee-escape! Much has been said, and many misleading articles have been written, and published, as to the inventor of this style of bee-escapes. On page 798, of the AMERICAN BEE JOURNAL for Dec. 14, 1889, I published the first description with a cut, though a poor one, of my horizontal bee-escape, and as far as I know, it was the first description of a horizontal escape ever published.

Of course, as I had anticipated, a number of modifications of this invention soon appeared. Now if bee-keepers will carefully examine these various escapes, and compare them with my published patterns, they will readily see that they are but modifications of mine.

Mr. Reese, on page 231, says that I claim the horizontal arrangement under a hole in a board, and in the bee-space, etc. Now no one knows better than Mr. Reese, that I have a right to make this claim, as I sent him the first diagram and description of such a device that he ever saw. Not only do I claim the escape in a bee-space, but in the thickness of the board, only $\frac{1}{4}$ or $\frac{1}{2}$ of an inch thick; and what is still better, one that is instantly removable from the top, without taking off the board, or disturbing the bees. If Mr. Reese will examine the model sent him, which he pronounces good, he will see that it is just that kind of an escape, and is not placed in the bee-space at all.

I have not much to say about Mr. Reese's last escape, as it is patterned after my No. 4; it is not so bad, only he nails it in a board, where it is to remain when used as an inner cover to worry and annoy the bees. We are consoled, however, by the assurance that we can scald, or build little fires, and burn the propolis off the escapes which the bees will be sure to put there. I think that Mr. R. has his outlets to the escape too small, being only about the size of a lead-pencil.

I also take exception to Mr. R.'s statement, that testing escapes by means of feeding or robbing, really proves nothing. There are no bees so persistent as robbing bees, and when I place the escape, reversed, on a hive that is being robbed by thousands of bees, and in an hour find that robbing has entirely stopped, I am satisfied that no bees can find their way back through the escape.

The only other point on which any question can be raised, as to the perfect working of these escapes, is whether they will sufficiently draw the bees down to the main hive, or under super. We experimented last season with small cones placed in one-inch holes, and found no trouble. Our standard escape has as great capacity for allowing bees to pass through as the old style Reese escape, and as it is provided with wing guides, we are certain that there will be no difficulty on this point.

Of course, the horizontal escape can be made in many forms, and as a curiosity I send to the BEE JOURNAL office my latest design; I do not think that this is any improvement on my No. 4 outlet escape, as I doubt if it can be much improved, only we want it in the Museum of the AMERICAN BEE JOURNAL, as some of these days some one will be claiming it as a spang new invention.

I am glad to see this matter thoroughly discussed, many designs being brought out, and bee-keepers will certainly be greatly benefited.

Milan, Ills.

[Mr. Dibbern's latest design of bee-escape is received, and has been placed in our Museum, with the date printed on it.—Ed.]

SHIPPING-CRATES.

The Size of Crates for Shipping Comb Honey.

Written for the American Bee Journal
BY DR. C. C. MILLER.

It is a dangerous thing to run athwart any opinion with C. F. Muth's name attached—not on account of the belligerent character of the man, but because he has had a wide experience, and is not likely to advance any opinion that he cannot well substantiate. Nevertheless, some things may be said in reply to what is said about shipping-crates on page 214.

It is not certain that just what is best for the Cincinnati market, is best for all markets. Mr. Muth has succeeded in popularizing granulated extracted honey in his market, so that it is preferred, if I mistake not; while it is well known that in some other markets granulation hinders sales. If in any market a large part of the honey is sold to private families by the crate, then a 12-pound crate is better than anything larger, and in some places I suspect that a 6-pound crate would be still more salable. But in some markets, the amount of honey sold to families direct by the crate, is scarcely

worth considering, and so the markets may differ.

I first shipped honey in 30-pound crates, double-tier, and I believe that I never used anything larger. Then I came down to the double-tier 24-pound crate, and I thought it an improvement. Later still, I adopted the 12-pound crate, and was surprised to find that my commission man was not enthusiastic at the change. He said that the retail grocer, in many cases, was inclined to buy a little at a time, and, when out of honey, he would buy but a single crate. If the crates held only 12 pounds, instead of 24, it was double the trouble to keep such a customer supplied throughout the season, and, moreover, he would hardly sell as much honey, because oftener allowing himself to get out of stock. He said, "It's just as easy to sell 24 pounds to a grocer as 12."

While I think of it, I will mention an incident that Mr. Muth might have used to help his cause: I once shipped him a lot of honey in double-tier crates. In transferring from one car to another the railroad hands placed the crates in the car glass side down! Possibly they thought that when so placed, there would be no danger of any one stepping on the glass and breaking it. The condition of the honey may be imagined. It was no little to Mr. Muth's credit that he saved me from heavy loss by it. But if the honey had been in single-tier crates, their shape would probably have saved them from such blundering placing.

"A heavy crate is invariably set down heavy." Yes, but does Mr. Muth not know that railroad hands do not handle 12-pound crates singly? That has been the general rule when I have seen them handling honey, and if two 12-pound crates are taken at a time, will they not be set down just as heavily as one 24-pound crate? The lighter the crates, the better for handling, so long as they are not so light that two will be taken at a time.

Mr. Muth says: "By far the most practical, the safest in transit, the most salable, and the cheapest of all shipping-crates, are those containing 12 one-pound sections."

Why "safest in transit?" Because if one section is placed on another, its weight endangers the section below. Well, but I do not have one section resting on another, although I use double-tier, 24-pound crates—each tier contains 12 sections, two wooden partitions of $\frac{1}{4}$ -inch stuff dividing the lower tier into three apartments, and on these two partitions rests a middle or false bottom of $\frac{1}{4}$ -inch stuff to support the upper tier, which is again divided into three parts. Thus I have practically four sections in a box,

making my crates just as safe in transit as the 12-pound crates.

But why "cheapest?" I have never known two 12-pound crates to be bought for as little money as a 24-pound crate.

As to "the most salable," I have already spoken. It depends somewhat upon the market, and I may mention one particular in which the double-tier crates have the advantage in any market. Suppose the double-tier to have—as I think they should have—two pieces of glass of just the same size as those used in the single-tier crates, there being a middle bar between the two pieces of glass. Now pile up side by side a pile of 12-pound single-tier crates, and a pile of double-tier 24-pound crates, and the 12-pound crates will have from 30 to 40 per cent, more wood in sight than the other. The more glass, the more honey in sight, and the more salable. Twelve-pound crates may be best for Cincinnati, but I think not for all markets.

Marengo, Ills.

WINTERING BEES.

Little Known About the Causes of Loss in Winter.

Written for the American Bee Journal
BY A. C. TYRREL.

After many years of experiment and observation, I have come to the conclusion (though somewhat reluctantly, it must be confessed) that as yet we know little or nothing about the causes that so often deplete entire colonies of bees, those suffering the most, nine times in ten, in my apiary, being those going into winter quarters with the largest amount of stores, largest number of bees, and, apparently, in the most healthy condition.

Many causes have been advanced to account for severe winter losses, among others being the pollen and honey-dew theories. Last season in this locality, honey-dew was plentiful—in fact, nearly all the box-elder trees fairly glistened with a thick sweet substance for a long time, the bees literally covering the trees while it lasted, but strange (?) to say, my bees never wintered better. Every colony at this writing is alive, and has remained in a passive condition since Nov. 17. It is impossible to find two quarts of dead bees in 32 colonies.

The weather has been changeable at times, many days the thermometer indicating 60° below zero; at other times, as many degrees above.

In preparing the bees for winter, last fall, I did not deviate to any extent from former plans, simply placing two or three thicknesses of burlap over

the brood-frames, and shutting in the bees by tacking wire-cloth over the entrances to the hives.

THE CAUSE, OR SOURCE, OF HONEY-DEW.

Heretofore there has been a difference of opinion respecting honey-dew, some maintaining that it falls from the heavens; others say that it is excrement from insects. My observations last year confirm the latter theory, for those trees covered with slugs or lice, and those only, produced the so-called honey-dew.

My wife has a large running-vine in the house, that, at one time, became thickly covered with plant-lice. Wherever they gathered in large numbers, a thick, sweet substance appeared, which could not have dropped from the clouds, and it is not honey-dew, either.

Madison, Neb., April 1, 1890.

HIVES.

The Small Hives vs. Large Hives --Which?

Written for the American Bee Journal
BY A. J. FISHER.

On page 215, Mr. G. M. Doolittle calls attention to this subject, which I think is of considerable importance to the larger mass of bee-keepers. After thirty years' experience as a bee-keeper, I cannot endorse all he says in regard to this matter. In reference to the large hives not economizing heat as well as the small ones, my experience has been directly to the contrary, in this way: that is, I claim, and have proven repeatedly, that colonies in the large hives will come through the winter much stronger in bees and honey, consequently they are enabled to economize heat in the same proportion as the small ones.

I have had hives containing 3,500 to 4,000 cubic inches, that did actually fill up with bees, and would swarm as soon (and often the first to swarm) as those in hives of 1,728 to 2,000 cubic inches, side by side; and what nice, large swarms these large colonies would cast! Then we do not have to be continually watching these large hives, and feeding the bees to keep them from starving to death, as we have to do with the small ones.

I wish to be understood right here, that I do not vindicate the above to be the correct size—I only relate it to show what has occurred in my experience. I believe it is universally admitted that the swarming propensity can be more easily controlled in the larger hives than in the small ones; and many of us are in great trouble

about the swarming fever—especially Dr. Miller.

Again, in reference to those bees that Mr. D. speaks of hatching in the large hives at nearly the close of the harvest, being only consumers, and no profit to the bee-keeper—surely, are not these very bees the ones that help to lay the foundation for the successful wintering of that colony, thereby preparing it for the next harvest?

In regard to this contraction business, putting the queen off into a small pen, where she cannot breed to her full capacity—I am considerably in doubt about the whole business, and whether it will ever pay the large majority of bee-keepers. This contracting the queen into such small space that she cannot exercise her power in full, I look upon with the same consistency as applying the power of a ten-horse power steam-engine upon the work that could be accomplished with a two-horse power. I have yet to see the hive that ever had too many bees, the production of one queen, for profit.

I will venture to predict that these small hives, with their contracting machinery, such as are used by specialists, will never be generally used by the large masses of bee-keepers. I claim that a hive should be large enough so that the queen may have room enough to develop her powers in full, at all seasons of the year, with the additional room for the storage of pollen, and an abundance of honey, without feeding, to last from the close of one harvest to the beginning of the next; with bees in such a hive, which will have early-gathered honey, that will be well ripened and sealed long before winter, I believe we would not hear of the wholesale losses in wintering that we now hear of.

I will here ask what this size shall be. Quinby says 2,000 cubic inches; Langstroth says not less than 2,150 cubic inches; Chas. Dadant and J. M. Hambaugh say still larger than either of the above, and I believe them to be good authority. I am well aware that Mr. Doolittle has good authority also on his side of the question, nevertheless I do not feel that the question is yet fully settled in favor of the small hive. I consider this an important subject. The small-hive men appear to be pretty numerous, and have spoken their pieces well. I would now ask the large-hive men to come forward and speak their piece. It is a subject that needs intelligent and practical discussion.

Any hive that is not large enough to furnish the queen room enough to breed to her full capacity, with additional room for the storage of an abundance of honey to last the year

through, without resorting to the sugar-barrel, I believe will never be generally used by the larger number of bee-keepers. In my experience, these large hives will stand the "ups and downs" of bee-life much better than the small ones. I am well aware that specialists can use a different hive than those who are not; but we cannot all be specialists. I would like to hear from others.

East Liverpool, Ohio.

TRANSFERRING.

How to Transfer Bees from Box-Hives to Modern Ones.

Written for the American Bee Journal
BY JULIUS J. PETTY.

Query 694, on page 197, asks advice on transferring bees from box-hives and re-queening the colonies at the time of transferring the bees. I have transferred a great many colonies of bees from the box-hives, and I will give my plan of transferring.

The time of transferring is in May, during apple-bloom, here in Kentucky.

I have all the tools convenient for work, consisting of a bee-smoker (Bingham's), hatchet, saw, table, knife (or honey-knife), cold-chisel, a box to place over the hive for the bees to go into, and the new hive.

I then give the bees a few puffs of smoke at the entrance (to make them fill themselves with honey), and wait a few minutes. Returning to the hive, and giving the bees a few more puffs of smoke, I then invert the hive, place a box over it, just the size of the hive, and commence drumming on the outside of the hive, to drive the bees up into the box.

Remove the old hive, and put the box on the old stand, so that the outsiders can go in. I then lift the hive to the table, taking the hatchet and cold-chisel to cut the nails so as to take off one side. I proceed to cut the combs out of the hive, and lay them on the table (on a piece of cloth); place the frames over the combs, and cut around the frame just the size of the frame, and let the frame go down over the combs. Now use the transferring clamps, or wrapping-twine, to fasten them in the frames, hang the frames (as you tie them) in the hive, using all the combs with brood in them.

If I have any pieces of comb with brood left, lay them on top of the frame, and let the brood hatch out, (or use the Heddon plan.) Where there is any crooked combs, cut a V-groove along the combs, and then press down on the combs to straighten them. Place them in the frames, and

after the bees have worked over the combs, the bee-keeper cannot tell that they were ever crooked. Use all of the combs in the hive.

In about ten days the hives should be examined, and if the combs are all glued to the frames, remove all the strings or clamps from the combs.

I would not advise re-queening a colony of bees at the time of transferring. My way of doing this work, is to wait about three weeks, and then give the bees a new queen.

Independence, Ky.

FRAME-COVERS.

Simple Covers Made for Brood-Chambers of Hives.

Written for the American Bee Journal
BY RANDOLPH GRADEN.

I have often seen items in the AMERICAN BEE JOURNAL and other bee-papers, describing covers for the brood-chamber, some using enameled-cloth, and others plain boards, etc. As yet I have never seen the cover described that I have used of late, still if I had applied for a patent and made any mention of it in the BEE JOURNAL, I doubtless would have heard that it had been in use for years! Still, I really believe that it is, or has been, in use, for it would seem very strange that so simple a thing had never been tried, or in use.

I notice that many use Hill's device for putting on the frames in the winter. If those same parties would use the cover that I am about to describe, they would need no other device for laying upon the frames, to make a passage for the bees; neither would those that use a board (that is, if the board is properly made), but there is an objection to the use of a plain board alone, for when you want to examine a colony, and it happens to be a little cool, the board comes off with a snap, that arouses the whole colony. As to the enameled cloth, its most serious objection is the accumulation of moisture. The cover which I have used of late, and which I like very much, is made as follows:

Take any thin board (I use soft, porous lumber for mine), and cut it one inch smaller—that is, shorter and narrower than the brood-chamber, and make a hole in the centre, which is used for different purposes—I use it in feeding, etc., but it can be used for the bee-escape.

Then take two T tins (I use strips of zinc, as that is stronger) and bend them L shaped, the short side of the L to be just scant bee-space. Then I have the L a little longer than the

board is wide, and lay the L shaped strip upon the board, so that the longer side of the L is on the board flat, having it so that it projects a $\frac{1}{4}$ or $\frac{1}{2}$ inch on each side of the board; then cut the zinc, that is, the side that lays flat to the corner of the L, and lap it around and against the other side, so as to make the zinc stronger, and the same length of the board in width.

Tack the zinc to the underside of the board, so that the zinc L sets upon the brood-frames where there is the most strength in the frames, so that there is a bee-space between the board and the brood-frames, for a passage for the bees. The T tins will answer the same purpose as the zinc strips.

Now put a strip of enameled cloth all around the cover or board, so that it will just cover the brood-chamber the same as the ordinary enameled-cloth covers, and it is complete. You will see that you can lay the lap back to peep into the hive, just the same as with the enameled-cloth cover, and if you twist it back and forth a little, it can be taken "off" as carefully as the cloth cover. As the bees cannot stick it fast to the tin or zinc, it will easily loosen from the propolis; and if the strips of cloth are properly tacked on, and the ends of the board cleated so that it cannot warp, it makes a good, strong cover for summer or winter.

Taylor Centre, Mich.

IOWA.

Report of the Eastern Iowa Bee-Keepers' Convention.

Written for the American Bee Journal
BY FRANK COVERDALE.

On March 18, 1890, at DeWitt, Iowa, was gathered a number of bee-keepers of this (Clinton) and adjoining counties. The meeting was called to order by J. M. Jacobs, who briefly stated the object of the meeting to be the organization of a bee-convention. The following officers were elected for what was named "The Eastern Iowa Bee-Keepers' Association:" President, Wm. Kimble; Vice-President, J. M. Jacobs; Treasurer, L. J. Pearce—all being of DeWitt; and Secretary, Frank Coverdale, of Welton.

The Constitution and By-Laws of the Progressive Bee-Keepers' Association of Western Illinois were read and adopted, with the amendment that the officers always be elected by ballot.

The afternoon session was called to order by President Kimble, and the enrollment of members read. The business of the meeting was then entered upon, and the first question discussed, was

HOW TO PREVENT INCREASE.

President Kimble said that after-swarms could be prevented by cutting out, on the seventh or eighth day, all queen-cells but one.

H. D. Harrington, of Calamus, stated that bees would seldom swarm if given plenty of room at the right time. He tiers the cases from one to five high, and has about one swarm from 20 colonies, when working for comb honey.

D. D. Hammond, of Malone, thought that swarming could not be prevented when working for comb honey, but he prevented it all that he could by giving plenty of room.

H. D. Harrington said that the man and the bee-hive must go together.

David Wagoner, of Calamus, extracted the honey to prevent swarming.

A. C. Bentley, of Maquoketa, thought that the free use of the extractor would do much toward preventing swarming.

"How shall we manage the swarms when so many issue at once?" was asked.

President Kimble keeps tubs of water in the yard, and when the bees show an indication of swarming, he sprinkles them so as not to have too many issue at once.

Ex-Senator L. W. Stewart, of Monmouth, stated that he had experienced but little difficulty while his bees were swarming. He keeps the queens' wings clipped.

A. M. Tinker, of DeWitt, inquired what to do with colonies when they did not do good work. The majority of those present deemed it necessary to give them a new queen.

J. O. Ferree, of DeWitt, proposed for discussion,

THE WINTERING OF BEES.

E. W. Coe, of Clarence, keeps, a small quantity of unslacked lime in his bee-cellar during the winter, for the purpose of absorbing the moisture; also raises the hives from the bottom-board, giving plenty of bottom ventilation.

A. C. Bentley keeps his bees in a well ventilated cellar made specially for their use, and gives a little ventilation to his hives. His bees winter successfully.

D. D. Hammond also winters his bees in a dry cellar, giving the hives a good pitch forward.

Mr. Stewart removes the tops of the hives, and covers with old carpets, and mats made of cotton-cloth containing $1\frac{1}{2}$ rolls of batting for each hive. He lost no bees. He made a special point of not taking the bees out of the cellar too early—say about the middle of April, or even later.

David Wagoner winters his bees in a cellar; removes the hive-cover, and puts a cloth over the top of the hives. The bees winter successfully.

L. J. Pearce gives top ventilation to prevent moldy combs.

President Kimble thinks that a bee-house is preferable to a cellar, for wintering bees. He raises his hives from the bottom-boards, and gives plenty of ventilation. He thinks that the top should be kept tight.

H. L. Harrington said that bees will winter all right if subject to proper ventilation.

Mr. Jacobs believes in ventilation for bees, but would avoid a draft.

The next question discussed was that of

FEEDING BEES.

Mr. Hammond was asked to give his views, and in answer he said that he would never feed bees unless it was absolutely necessary, as too much feeding stimulates an overplus of breeding, when not desired. If feed must be given, use full combs of sealed honey.

FOUL BROOD.

Mr. Jacobs inquired if any member present knew of the existence of any foul brood in this vicinity. Mr. Coe did not think that the disease was in Iowa; he had seen it in California.

President Kimble stated that the disease had been prevalent years ago in adjoining counties.

CRATES FOR SHIPPING HONEY.

"Which are the best crates for shipping comb honey?"

Mr. Coe favored the single-tier, 24 sections in a crate, with glass sides. He would not advocate re-packing, as it does not ship as well, and he receives no better prices.

C. Kuebler re-packs and ships in the Lewis crates.

It was quite unanimously thought that shipping-crates holding only one tier is best.

"Which is the most profitable race of bees to keep?" For all practical purposes, the Italian bees were considered first on the list.

At the evening session, after prayer by Rev. F. J. Norton, and some pleasing music, Hon. L. W. Stewart, of Monmouth, gave a rapid but most interesting sketch of bee-culture. From the earliest history, the bee had been the companion of man; honey in Sacred Writ was often referred to as an article of food and of commerce; this industry, like all others, has its ups and downs, but it is now, through the investigation of Huber, and the improved hives of the present day, rapidly coming to the front as one of the principal industries.

"Do bees injure fruit?" was the subject of an interesting essay read by Mr. A. M. Tinker, in which he contended that by distributing the pollen, it actually increased the fruit product.

The average yield of each colony, spring count, for last year, was 112 pounds—about half extracted.

Welton, Iowa.

INCREASE.

How to Manage It when Working for Extracted Honey.

Written for the American Bee Journal
BY AARON BENEDICT.

Mr. H. W. Funk's prize essay on page 198, is excellent, all but the ventilation of the colony. I put the extra hive under, instead of on top, of the old hive. If the old colony swarms, I give them, place them on the old stand, put the old hive on top with a screen honey-board between. After they get fairly to work in the new hive, remove the screen honey-board, and let the bees together again. Remove all the queen-cells from the old hive.

If there is a case of sections on the old hive partly filled, leave it until finished. By the time the queen gets the lower hive filled with eggs, the young bees will all be hatched; and if the honey-flow be good, the bees will have filled it with honey. This can be extracted before the fall harvest comes.

DIVIDING COLONIES FOR INCREASE.

This is done the same as above, by moving the old hive, and putting a new one in its place. Now open the old hive, take out the comb that the queen is on, place this in the new hive, put a frame of comb in its place, put on a screen honey-board, and place the parent hive on top. In eight or nine days cut out all queen-cells in the old hive, take away the division-board, let the bees together, and the job is done. This is the best plan for out apiaries to secure extracted honey with the least trouble.

After the honey harvest is over, place the bees back in the hive, giving them plenty of good, sealed honey. All the rest can be extracted. If the bees swarm again, give them, and place them under the other two, as in the first place. This keeps the working-force together. If the empty hive is placed on top of the parent hive, the bees may, or they may not, work in the upper hive.

If the queen is left in the parent hive, and is cramped for room to deposit eggs, the bees will be almost sure

to swarm out. By placing the queen in the empty hive, she has ample room to deposit her eggs for producing workers to gather the honey, and, if the honey-flow is abundant, the bees will fill the parent hive full of honey. This can be extracted at intervals, or all at once. Try my plan, and see if it is not better than Mr. Funk's method.

Bennington, Ohio.

CONVENTION DIRECTORY.

1890. Time and place of meeting.

- May 1.—Southwestern Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.
- May 3.—Susquehanna Co., at Hopbottom, Pa.
H. M. Seeley, Sec., Harford, Pa.
- May 7.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.
- May 7, 8.—Texas State, at Greenville, Tex.
J. N. Hunter, Sec., Celeste, Tex.
- May 19.—Northern Illinois, at Cherry Valley, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.
- July 17.—Carolina, at Charlotte, N. C.
N. P. Lyles, Sec., Derita, N. C.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

SELECTIONS FROM OUR LETTER BOX

Getting Bees Out of the Cases.

I use two methods for getting bees out of cases filled with honey, viz: 1. In warm weather I slip a board under the case to be taken off, and leave it there for three or four hours (but not longer), after which I lift the cover off quickly, raise one end of the case, and blow a few puffs of smoke under—then you should see my bees escape. 2. Later in the season, when the nights are cool, I use a cloth (burlap) instead of a board, with one corner turned back, so as to leave a small hole for the bees to get down through. I do this in the evening; the next morning before the sun is up, I can carry the cases into the honey-house with scarcely a bee, and no robbing started. I have taken several tons of honey off, by the above methods, and know that they work all right. I have neither boards nor cloth to sell, and do not use any funnel in my bee-escape. Everbody is welcome to use the plans.

Savanna, Ills.

JOHN HANDEL.

Apicultural Prospect in Florida.

The greater portion of Florida has been suffering from a six-months' drouth. I do not think that an inch of rain has fallen in all that time. Capillary action is very active in our sandy soils, and brings up water from below to supply, in a great measure, the wants of vegetation, but on the surface there has been much dried grass and other material, and the forest fires have licked up hundreds of acres of this, and, in doing so, destroyed much of the early bee-pasturage.

As another result of the dry spell, we have been visited by one of the most destructive "freezes," lasting but a few hours, that the State has ever known, and that lessened still more our chances for an early honey crop, by cutting off the bloom

growth of the orange and other trees that were about coming into flower. The orange trees are putting on new buds, and will probably bloom to some extent later on, but I do not look for much honey from blossoms out of season. The mangrove—our main stay—seems to be all right, and we hope to have a heavy flow from it, in which case those whose bees are in good condition, will get a good, paying crop of our finest grade of honey.

My own bees are in fair condition, and well supplied with honey in their hives, as a rule; but, as is my custom in April, I am feeding a little to keep them breeding, so as to be ready for the honey-flow that commences in May and lasts until August. Having many dropped oranges on the ground in my groves, I have split some of them for my bees, and they gather thickly upon them, and suck up the rich juices until nothing but a dry shell remained. I believe there is profit in doing this late in the season, where circumstances will allow of it. I do not look for a large honey record here this season, but I believe we have reason to hope for a fair crop.

W. S. HART.

Hawk's Park, Fla., April 4, 1890.

Wintered Poorly—Diphtheria.

I have 20 colonies of bees left, out of 77 colonies put into the cellar last fall. I took out a few on March 1, and they are all right—all had plenty of honey. My family have all had the diphtheria; for four weeks I had but three nights of sleep. We are all over it now.

FAYETTE LEE.

Cokato, Minn., April 7, 1890.

Hard Winter on the Bees.

The winter is over, which was a hard one on my bees. They seem to have gone the same as Mr. Ellingwood's bees (see page 220). My Italians do not seem to stand the winter the same as the hybrids and blacks. I lost 6 colonies of Italians, and only one of the hybrids; I have only 8 colonies left, 4 being Italians. They are working hard, and getting pollen from willow and other trees.

JOHN BOERSTLER.

Vashon, Wash., April 1, 1890.

Use of Drone and Queen Traps.

On page 236, Mr. D. B. Cassady asks the following question, which is referred to me for reply: "If the drone and queen-trap is used on hives to catch the queen, will it not hinder the workers from carrying in pollen, as the perforations seem too small to admit of the bees getting the loads of pollen through?"

In answer to the above inquiry, I will say that the bees are not in the least hindered in their work by placing a queen-trap at the entrance of the hive. If a trap is placed at the hive-entrance of a large colony of bees, and a box arranged to catch the pollen which happens to be rubbed off when the bees pass through the metal, it will be seen that there is no more than would be found at the entrance of a hive where there is no trap.

An expert bee-keeper once visited my apiary, and the trap was talked about. Said our friend, "I don't like the trap, as it brushes so much of the pollen off the legs of the bees, when they pass through the metal." I replied that he was mistaken, and that the trap did not work as he supposed. We at once went into the apiary and made an examination, as there were several traps in use there. We first examined a large colony which were working through a trap; the trap had been on the

hive for several weeks; and after a close inspection about the hive and in the grass under the alighting-board, I believe three pellets of pollen were found, and this was after the bees had been at work several hours carrying in pollen. So much for that. Now let us go a little further.

A good deal has been said in years past about too much pollen in the brood-nest. How would it do to use still smaller perforations in the metal, and try to keep out a large part of the pollen? I will say, however, that I never saw a colony that had too much pollen. I have seen, on many occasions, cases where brood-rearing was retarded in the early spring on account of the scarcity of pollen.

No, the bees are not in the least disturbed when a trap is placed at the entrance of their hive. The perforations are not too small for the worker-bees to pass through—a thing which you can discover in a short time after a trap is placed on the hive. There are now nearly 100,000 traps in use, and no one has ever complained that the bees have trouble in passing the metal. Test it for yourself.

HENRY ALLEY.

Wenham, Mass.

Wintering in a Bee-House, etc.

I am drifting into the bee-business. I commenced with one colony, and now I have 17. They are now in the bee-house, and are doing finely. I find it a pleasant and profitable business; my spare time can be occupied in my favorite pursuit—inventing and experimenting. Finding it necessary last summer to have a device for fastening foundation in one-pound sections, I got up one which I think is better than any other that I have seen.

JOHN LUCAS.

Small Loss in Wintering.

Bees have been bringing in pollen lively to-day, and I am surprised to find mine in so fine a condition. I considered the stores poor last fall, and expected a loss of 25 per cent., but it will hardly reach 5 per cent., if we have reasonable weather from this on. Every winter strengthens my opinion that double-walled hives are the best adapted to this climate. My colonies are very strong and uniform.

GEO. E. HILTON.

Fremont, Mich., April 8, 1890.

Colonies Strong in Bees.

My bees all came through the winter in good condition. They are gathering pollen, and have been for several days. I never saw them so strong in the spring, in my thirty years of bee-keeping. Everything looks fair for a good crop this season, but I fear we will have too much rain. Our last three seasons have been too dry, and we have had poor honey crops, but still the bees have paid their way.

W. H. GRAVES.

New Carlisle, Ind., April 9, 1890.

Standard Implements.

1. Should a hive, frame, section, or any apianian implement be adopted as the standard?
2. If we do, would it not be a waste of time, money, patience, energy and genius, on the part of the inventor, to give more rigid scrutiny to our industry?
3. Would it be the proper proclamation to the world, that we have arrived at the summit of our art, and that we had no further use for the inventor, bee-papers, or conventions?

4. Would it not be better to go on in a go-as-you-please plan, and try to keep up with the procession?
J. W. TEFFT.
Collamer, N. Y.

[Until that which is perfect has come, it would not do to impede progress by adopting a "standard." Invention and improvement go hand in hand—but inventions are not all improvements, by any means.—Ed.]

Bees Wintered Nicely.

I started last spring with 10 colonies, and increased them to 30, all of which I will have to commence with this season. They have all wintered nicely, so far. This is a queer year—when we ought to have our spring, we are getting our winter. Last year was the poorest that I ever saw since keeping bees; from 30 colonies I got 600 pounds of honey.

J. H. SCHERER.

Lena, Ills., March 30, 1890.

HONEY AND BEESWAX MARKET.

BOSTON, April 9.—We quote: Fancy 1-lbs., 16@17c.—very little in the market. Two-lbs., 15c. Extracted, 8@9c. No Beeswax on hand.

BLAKE & RIPLEY, 57 Chatham St.

CHICAGO, April 8.—Comb honey has sold well lately—there is practically none on the market, it being taken soon after arrival, if in desirable shape. Consignments that have hung along all winter have been closed out at 12@13c. for good, and 14c. for fancy. Extracted is dull at 6@8c. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, April 8.—Demand good, and supply fair. We quote: White 1-lbs., 12@13c.; very fine, 14c.; medium, 11@12c.; dark and old, 9@10c. Extracted, white, in barrels and ½ barrels, 7½@8c.; in tin and kegs, 7@8½c.; dark, in barrels and ½ barrels, 6@6½c. Beeswax, 23@26c.

A. V. BISHOP, 142 W. Water St.

CHICAGO, April 8.—We quote: White clover in active demand, and receipts find ready sale: 1-lbs., 13@14c.; 2-lbs., 12@12½c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 6½@7½c. Beeswax—bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, April 7.—Supply of white 1-lbs. is very limited—10,000 or 20,000 lbs. more of fancy comb in 1-lb. sections would find a market here before the new crop comes. Extracted sells very slowly. We quote: Fancy 1-lbs., white, 13c.; choice 1-lbs., 12c. Fall amber 1-lbs. and 2-lbs., 9@10c. Choice white 2-lbs., 11@12c. Extracted, white, 7c.; amber, 5@6c. No Beeswax in the market.

CLEMONS, CLOON & CO.,

Cor. 4th and Walnut Sts.

KANSAS CITY, Mo., April 5.—The market is cleaned up. We quote: 1-lbs. white, 12@13c.; 2-lbs. white, 10@11. Dark 1-lbs., 8@10c.; dark 2-lbs., 8@9c. Extracted, white, 6@6½c.; dark, 5c. Demand good.

HAMBLIN & BEARSS, 514 Walnut St.

DENVER, April 9.—1-lb. sections, 13@15c.; Extracted, 7@8c. There is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 22@25c.

J. M. CLARK COM. CO., 1517 Blake St.

DETROIT, April 10.—Comb honey is selling slowly at 10@13c. Extracted, 7@8c. Beeswax, scarce at 26@27c.

M. H. HUNT, Bell Branch, Mich.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON, Corner Freeman & Central Aves.



ALFRED H. NEWMAN,
BUSINESS MANAGER.

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